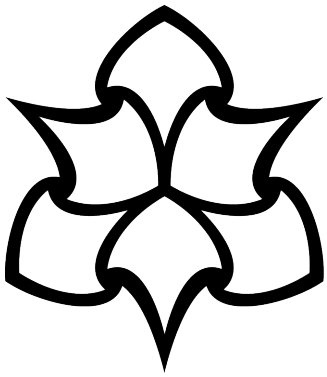

Different Recipes for Success in Business Relationships:

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Abstract

Companies need to manage business relationships successfully in order to stay competitive. Drawing on configurational logic, we argue that companies can improve their relationship performance through leveraging the structure of their business relationships. However, relationship structure must be aligned with the company's business strategy. To date, research has focused on individual characteristics of business relationships, but not much is known about relational configurations, i.e. the interplay between different business relationship characteristics on the one hand, and the firm's underlying business strategy on the other. Hoffmann's (2007) strategy typology, namely shaping, adapting, and stabilization strategy types, was used in this research to operationalize different business strategies. Drawing on a sample of 658 business service companies and employing fuzzy set qualitative comparative analysis (fsQCA), this study confirms the existence of different 'recipes for success', i.e. equifinal configurations leading to relationship performance by business strategy type. For each of the three business strategies, very different combinations of relationship characteristics are successful, each encompassing a distinct configuration of core and periphery conditions. While firms following an adapting strategy should stress behavioral commitment above all other relationship characteristics, the other two business strategies instead rely predominantly on other factors such as trust and communication. This study contributes to business marketing theory and practice by highlighting different strategies to develop business relationships successfully.

Keywords: Configuration theory, business relationships, business strategies, fsQCA

Different Recipes for Success of Business Relationships:

A Qualitative Comparative Analysis

1. INTRODUCTION

Business relationships are important for the success of firms. Research shows that they allow firms to mobilize important resources that they do not themselves control, i.e. business relationships deal with issues relating to resource dependencies (Pfeffer & Salancik, 1978; Mouzas & Naudé, 2007). They therefore have positive effects on pivotal managerial aspects such as innovativeness (Muller & Zenker, 2001; Rindfleisch & Moorman, 2001) or reduction of operating costs (Cannon & Homburg, 2001; Selnes & Sallis, 2003), and ultimately on company profitability (Fang et al., 2008; Palmatier et al., 2007). However, while considerable research exists regarding the *characteristics* of such business relationships, little research focuses on the *configurations* of these business relationships (e.g. Zaefarian et al., 2013). Previous studies discussed extensively the characteristics of business relationships such as trust, commitment, communication, relational norms, opportunistic behavior, or relationship-specific investments (e.g. Palmatier et al., 2007; Fang et al., 2008; Morgan & Hunt, 1994, Siguaw et al., 1998). Configurations on the other hand refer to the interplay between different business relationship characteristics and therefore provide a holistic perspective in line with Gestalt-theory (Dess et al., 1993). Thus, for a configurational perspective the primary issue is not whether individual characteristics of business relationships are present, or how developed they are (e.g. how much trust exists between the partners in a business relationship), but rather how different business relationship characteristics interact to form a constellation of conditions (Meyer et al., 1993).

Such a configurational logic, while commonly used in research in strategy (Dess et al., 1993; Miller, 1996), is not often employed in (business) marketing studies (e.g. Malhotra et al.,

2013; Vorhies & Morgan, 2003; Zaefarian et al., 2013). However, managerial practice does not focus primarily on decisions about merely optimizing individual levers (such as the degree of pro-active communication by a retailer within a business relationship with its suppliers) but struggles with more complex and embedded constellations of several levers together (such as the trade-off between investing more in pro-active communication, which would allow the retailer to reduce relationship-specific investments without harming the overall performance of a buyer-supplier relationship by increasing relational costs or the threat of opportunistic behavior). The underlying assumption of such a perspective is that there exist different 'recipes for success', i.e. a specific performance outcome can be obtained through several distinct configurations, not just through a single and optimal make-up of conditional factors. Configurational logic thus also considers the concept of *equifinality* (e.g. Fiss 2007; 2011). Using such a configurational perspective develops an understanding of the importance of different conditions, i.e. how different business relationship characteristics might be optimally employed in different contexts. Improving certain relational characteristics within a configuration can be important for achieving superior performance, while the reverse may not be true: a reduction of these relational characteristics may not be associated with lower degrees of performance. This phenomenon of an *asymmetric impact* of certain conditions is also of interest in studying configurations of business relationships (Ragin, 2006; Woodside, 2013).

Our research takes its starting point from these considerations based on configuration theory. We specifically focus on configurations that are associated with different relational strategy types, i.e. different ways in which companies can use business relationships as part of their overall portfolio of interactions with other actors in the business networks (Doty et al., 1993; Vorhies & Morgan, 2003; Varadarajan & Clark, 1994). Such a *strategy type* perspective takes the view that not all relationships portfolios are meant to work in the same manner (Hoffmann, 2007). For

example, Zaefarian et al. (2011) show that five different resource-acquisition types exist which explain why companies engage with relational counterparts like suppliers or customer companies, while Hoffmann (2007) identifies three alliance relationship management strategy types: shaping, adaption, and stabilization. Research is still scarce on business relationships which utilize such a strategy type logic to understand whether or not different relational characteristics are associated with different strategic intent to manage a firm's overall relational portfolio. An exception is the study by Zaefarian and colleagues (2013) which shows that based on a 'fit as profile deviation' analysis, different strategy types based on Miles and Snow (1978) are associated with different ideal configurations of relationship characteristics. However, their analysis is based on simple causality, that is, a regression-based method and does not cover asymmetric or complex causal phenomena (Greckhamer et al., 2008; Fiss, 2007).

Therefore, the research question of our study goes further than previous work and is aimed at understanding complex configurations, i.e. the different make-ups of relational characteristics, which are associated with different relational strategy types. In particular, we will address the question of which relational characteristics (e.g. trust, commitment) are necessary or sufficient, and which represent core or periphery conditions for configurations that are characterized by superior relationship performance (but also by the absence of relationship performance). Addressing these questions makes several important contributions: first, this is one of the very few empirical studies examining the success of business relationships through a configurational lens. Specifically, we find that multiple paths (or 'success recipes') promote relationship performance and that it is the interplay of relational characteristics that is key, rather than single conditions. Secondly, our study provides a more comprehensive and systematic understanding of the relationship between business relationship strategies and the underlying structure of business relationships (i.e. the configurations of relational characteristics). The research shows that, irrespective of their strategic intent, firms

can achieve high relationship performance as long as the relevant relationship characteristics are aligned. Thirdly, fuzzy set qualitative comparative analysis (fsQCA) is employed which is well suited for understanding phenomena based on configuration theory (Greckhamer et al., 2008). Through this research, the authors intend to promote further this methodology in the field of marketing and strategy research.

We used a dataset of 658 services companies from the United States, which were split into three subgroups, each representing one particular relational strategy type according to Hoffmann (2007). To identify configurations, we employed seven relational characteristics as 'conditions' in our analysis: interpersonal trust, interorganizational trust, affective commitment' behavioral commitment, relationship-specific investments, communication, and cooperation. The dependent variable is relationship performance. In line with the configurational logic, we used an innovative research method (fsQCA), which uses complex causality to deal with issues around equifinality and asymmetry (Woodside, 2013). Our results revealed that well-performing business relationships depend on multiple relationship characteristics (i.e. configurations). In total, eight different equifinal 'recipes for success' were identified, each constituting a distinct set of core and peripheral conditions. For the three relationship strategies a very different combination of relationship characteristics were identified that promote business relationship success.

Our article proceeds as follows. First, we introduce issues around business relationships, particularly important relational characteristics as well as relational strategy types. Secondly, configuration theory is introduced and linked to Qualitative Comparative Analysis (QCA), particularly emphasizing necessary versus sufficient, and core versus periphery conditions. Thirdly, our specific research method and the research design are introduced and the data calibration and analysis is presented. This is followed by a discussion of the findings and a conclusion that outlines theoretical as well as managerial implications of our work.

2. RELATIONSHIP CHARACTERISTICS AND STRATEGY TYPES

2.1. Relationship characteristics

Business relationships are complex and multi-faceted in nature. Research on the make-up and characteristics of business relationships has proliferated over the last thirty years. Scholars have utilized different theoretical perspectives to explain the causal mechanisms among a set of identified relationship characteristics. Examples of these theories include the commitment-trust theory developed by Morgan and Hunt (1994), dependence theory (Bucklin & Sengupta, 1993; Hibbard et al., 2001), and relational exchange theory (Dyer & Singh, 1998; Kaufmann & Dant, 1992). Each of these theories has stressed certain characteristics of business relationships such as trust, commitment, communications, cooperation, and dependency. In addition to these more specific theories, scholars have also commonly used transaction cost economics to study the concepts of relationship-specific investment and opportunism in buyer-supplier relationships (e.g. Ganesan, 1994; Selnes & Sallis, 2003).

In an attempt to develop a broader perspective in the study of the nature of business relationships, Conner (1991) introduced the resource-based view (Wernerfelt, 1984) as a potential unifying paradigm. Later on, Dyer (1996) and Jap (1999) extended this theoretical framework. The resource-based view of a buyer-supplier relationship integrates different relationship characteristics and argues that superior company performance can be achieved through building successful buyer-supplier relationships (Dyer & Singh, 1998; Palmatier et al., 2007). This perspective has subsequently been widely used in the study of buyer-supplier relationships (e.g. Palmatier et al., 2007).

Following this approach, our study used a set of relationship characteristics identified by Palmatier et al. (2007) to delineate important relationship characteristics as determinants of

relationship structure. This set of relationship characteristics includes trust, commitment, communication, cooperation, and relationship-specific investment, and as such integrates different theoretical perspectives, covering both attitudinal and behavioral aspects (Deshpandé & Farley, 2004; Gainer & Padanyi, 2005), and focusing on characteristics used in previous seminal studies (e.g. Cannon & Perreault, 1999; Morgan & Hunt, 1994; Palmatier et al., 2006; 2007).

2.2. Relational strategies

To account for the manifold business relationships of a focal firm, our study adopted a business relationship portfolio approach. Relationship portfolio analysis is seen as a means of capturing and analyzing a company's network of relationships (Leek et al., 2006). In this approach, the unit of analysis is shifted from a single dyadic relationship to all the business relationships managed by a firm (Furlan et al., 2009). While some researchers argue that a portfolio perspective represents an undue simplification (Armstrong & Broadie, 1994), we agree with Zolkiewski and Turnbull (2002) that this approach provides a method to conceptualize the diverse direct and indirect customer relationships that a focal firm has to manage simultaneously. Understanding the relational strategy of a firm based on how it manages its portfolio of business relationship has been widely used in management research (e.g. Fiocca, 1982; Olsen & Ellram, 1997; Yorke & Droussiotis, 1994). Of relevance to our study are relational strategy types, which focus on a focal company's interactions with business alliance or customer partners. The study by Zaefarian et al. (2011) integrates the interaction approach with the insights of the resource-dependence theory (Pfeffer & Salancik, 1978) and proposes the existence of five different relational resource-acquisition types. The resulting relationship portfolio strategy typology explains the dominant logic as to why companies engage in business relationships with their counterparts.

In contrast to the interaction approach, Hoffmann (2007) uses relational and resource-based reasoning as well as the dynamic resource system approach (e.g. Forrester, 1961) in developing his

typology of different relationship portfolio strategies. He identifies three distinct relational strategies, the first of which is reactively *adapting* to the changing environment by analyzing market information and reacting to it, e.g. by instigating new business relationships. The second is actively *shaping* the environmental development according to firm strategy, i.e. developing business relationships in a manner which suits the focal firm. The third is *stabilizing* the environment, including existing business relationships, in order to avoid organizational changes (Hoffmann, 2007). A short description of each of these strategies is provided in Table 1.

Insert Table 1 about here

Our study used the relationship portfolio strategy developed by Hoffmann (2007) due to its widespread acceptance, thereby following the argument of Kale and Singh to shift "the level of analysis to the entire alliance portfolio and away from each individual alliance within that portfolio" (Kale & Singh, 2009, p. 57). Although companies need to know how to configure their relational portfolio along various dimensions this research area is still in its infancy. Moreover, in line with extant research (e.g. Kale & Singh, 2009; Wassmer, 2008) the classification focuses on business-level portfolios through which strategic alignment is mainly achieved. To date, only a few typologies clearly specify the unit of analysis (Kale & Singh, 2009). Because Hoffmann (2007) emphasizes internal aspects of organizations (e.g. capacity to explore new markets) as well as market dynamics (e.g. future resource demand from competition), it overcomes some major limitations inherent in other typologies. Finally, this classification has gained increased attention among scholars and managers over the past years (Wassmer, 2008).

3. CONFIGURATION THEORY AND ANALYSIS

3.1. Configuration Theory

Configuration theory is an approach used to understand how a firm's organizational structure is related to its strategic intent (Hult et al., 2006). This theory has its roots in the strategy literature (Miller, 1996) and argues that for every given context, there exist a small number of 'organizational configurations' of structure and strategy that fit better than others and thus yield superior performance (e.g. Dess et al., 1993; Meyer et al., 1993). The greater the fit between the strategy and the structure, the higher the performance (Vorhies & Morgan, 2003). Meyer et al. (1993, p. 1175) describe 'organizational configurations' as "any multidimensional constellation of conceptually distinct characteristics that commonly occur together". In light of this, rather than searching for universal relationships that hold true across all firms, configuration theory argues that relationships can best be understood in terms of sets of conditions (Vorhies & Morgan, 2003). However, an ideal set of conditions or variables will not always yield superior performance (Doty et al., 1993). The prime assumption of configuration theory is that elements of strategy and structure often coalesce into a limited (i.e. manageable) number of *Gestalten*, configurations, or archetypes that account for a large proportion of high-performing firms (Miller, 1986, 1996). Thus, several (but not many) 'recipes for success' exist. To support this assumption, Meyer et al. (1993, p. 1175-1176) argued that "If organizations were complex amalgams of multiple attributes that could vary independently and continuously, the set of possible combinations would be infinite. But for theorists taking the configurational perspective, this potential variety is limited by the attributes' tendency to fall into coherent patterns. This patterning occurs because attributes are in fact interdependent and often can change only discretely or intermittently".

Given that the number of ideal configurations is limited, and also because these ideal configurations are composed of "tight constellations of mutually supportive elements" (Miller, 1986, p. 236) and are relatively long lasting in nature (Miller, 1986, 1996), it can be argued that

the use of a configurational perspective helps to examine and explain the complex interrelated relationships among constructs of different domains without overly simplifying the phenomena under study. In the context of this study, the configurational lens is on relationship structure (i.e. multidimensional constellation of relationship characteristics) on the one hand, and relationship portfolio strategies (i.e. adapting, stabilizing and a shaping strategy) on the other.

3.2. Operationalizing Configuration Theory through fsQCA

QCA represents a suitable methodology for analyzing configurational statements (Greckhamer et al., 2008; Woodside, 2013). It is based on set-theoretic assumptions and provides an understanding of the interplay between different variables (called conditions) in affecting the presence (or absence) of a specific outcome. QCA has not been used widely in management research and has seen only very limited applications in business marketing (e.g. Ganter & Hecker, 2013; Cheng et al., 2012; Schneider et al., 2010). As a method it has its disciplinary home in the field of political science and sociology (e.g. Redding & Viterna, 1999; Hollingsworth et al., 1996).

QCA differs considerably from more conventional, variable-based data analysis methods (such as regression analysis or structural equation modeling). It is based on what Mahoney and Goertz (2006) refer to as a *causes-to-effects approach.* As part of the set-theoretic analysis cases are described as combinations of attributes (i.e. configurations of causal conditions) as well as the outcome in question (Fiss, 2007). That is, each observation is considered as a whole and is not disaggregated into single effects (Rihoux & Ragin, 2009). In contrast, standard variable-based methods use an *effects-to-causes* approach (Mahoney and Goertz, 2006), i.e. the primary objective is to estimate the average effect of one (or more) variables on an outcome in a whole set of cases. Therefore, QCA as a case-oriented research approach was originally designed for, and is still mostly applied with, small- or medium-N samples. However, prior research indicates that it is also

well suited to analyze large-N empirical data, which is common in management research (e.g. Fiss et al., 2013; Woodside et al., 2012).

Because set-theoretic methods consider configurations of causal conditions, they represent valuable analytic tools to examine situations of *complex causality*. This relates to the finding that, first, outcomes of interest seldom have a single cause but are best explained through *multi-causality* considerations (Ragin, 2006), and secondly that causes rarely operate independently from each other, i.e. are *interdependent*. Hence, QCA explores how sets of conditions combine to generate an outcome of interest rather than treating them as competing in explaining the outcome (Ordanini & Maglio, 2009). In addition, a specific cause may have different (i.e. positive and negative) effects depending on the context, thereby indicating *asymmetry* (Greckhamer et al., 2008). Conditions found to be related in one configuration might be unrelated or inversely related in another (Ragin, 2000). Furthermore, set-theoretic methods such as QCA are particularly useful for examining *equifinality,* which is an assumption of configuration theory (Fiss, 2007; 2011). Equifinality argues that different recipes for success exist, i.e. occasions in which "a system can reach the same final state from different initial conditions and by a variety of different paths" (Katz & Kahn, 1978, pp. 30). Equifinal configurations are treated as logically equivalent and thus substitutable (Ragin, 2008). Identification of equifinal solutions for specific issues has evolved as an important area of management studies (e.g. Marlin et al., 2007; Payne, 2006), because it provides firms with a variety of optional design choices for a desired outcome, thus fostering the potential for efficiency gains by choosing the configuration which best fits with the company's strategy, culture, or already existing resource endowment (Fiss, 2011).

In order to examine which combinations of conditions lead to the outcome desired, set-theoretic methods rely on *Boolean rather than linear algebra*. Set-theoretic approaches build upon the premise that the relationships between different variables are best understood in terms of set

membership (Fiss, 2007). Conventional methods of QCA, such as crisp sets (csQCA), define membership in sets using binary values (1 = membership, and 0 = non-membership), that is, a specific case either shows or does not show a particular causal condition. With fuzzy sets (fsQCA), however, membership in sets is not restricted to binary values but may instead be defined using membership scores ranging from ordinal up to continuous values (Ragin, 2008). A fuzzy set can be viewed as "a continuous variable that has been purposefully calibrated to indicate degree of membership in a well-defined and specified set" (Ragin, 2008, p. 30). Therefore, fsQCA allows researchers to specify their constructs with regard to the degree to which certain attributes are present (Fiss, 2007). In order to assess set-theoretic relations with fsQCA, both causal conditions as well as the outcome in question are represented in terms of set membership scores. The primary objective is to explain cases that show the desired values for the outcome in question by describing the degree to which causal conditions or combinations of these conditions (i.e. configurations) are present. Thus, fsQCA explores how the membership of cases in causal conditions is linked to membership in the outcome (Ragin, 2008).

Hence, single observations can belong (more or less) to a set of conditions, and have varying degrees of membership in different possible configurations (Ganter & Hecker, 2013; Ordanini & Maglio, 2009). Therefore, all variables (i.e. conditions and outcome) are calibrated into set membership values ranging from 0 (observation is fully out of a set) to 1 (observation is fully in the set) (Fiss, 2011; Ragin, 2000). Based on the membership values, QCA determines configurations leading to a particular outcome, and generates a reduced set of logic statements that describe the underlying causal patterns (e.g. Ordanini & Maglio, 2009). These set-theoretic relationships are interpreted in terms of *necessity* and/or *sufficiency*; a causal condition is defined as necessary if it has to be present for an outcome to occur, and as sufficient if by itself it can produce a certain outcome (Ragin, 1987, 2000, 2008).

Because the algorithm is based on counterfactual analysis researchers may in addition detect *core and peripheral* causal conditions that contribute to the outcome in question. That is, depending on the way counterfactuals are considered QCA provides three different solutions from which two of them are particularly relevant. As Fiss (2011, p. 403) points out, "… core conditions are those that are part of both parsimonious and intermediate solutions, and peripheral conditions are those that are eliminated in the parsimonious solution and thus only appear in the intermediate solution". Thus, inspection of the parsimonious and intermediate solutions allows researchers to draw conclusions regarding the *causal essentiality* of specific combinations of causal conditions (Fiss, 2011).

4. RESEARCH METHOD AND DESIGN

4.1. Sample

We used data from 658 business service firms located in the United States. The data was collected using an online questionnaire sent to senior marketing managers of companies with 25 or more employees. Questionnaires were mailed to a total population of 2,300 service companies as part of an online panel of business-to-business firms, resulting in a response rate of 28.6%. Senior marketing managers were asked to answer the questions for the strategic business unit they were working in, and to consider one of their most important business relationships as the unit of analysis (except for the strategy type questions, which refer to their overall relational portfolio strategy), in line with Zaefarian et al. (2011). On average the responding service firms have been in business for 31.8 years. A total of 238 companies were small firms (fewer than 100 employees), 151 companies were medium sized (between 100 and 499 employees) and 269 firms were classified as large (more than 500 employees). Based on a self-typing methodology, the respondents identified their companies (and particularly the business relationship which they chose for answering the

questionnaire) into the three relationship strategy types by Hoffmann (2007): adaption strategy (274 firms), stabilization strategy (197 firms) and shaping strategy (187 firms).

We tested for non-response bias to ensure that the sample was representative of the panel population. As non-respondents have been found to resemble late respondents (Armstrong & Overton, 1977) we examined the differences between early respondents (those who responded in the first week) and late respondents (responded in the second week or later). The t-test analyses showed that both groups did not differ significantly in their responses, indicating no systematic differences between early and late respondents. Furthermore, we compared the respondents and non-respondents based on generally available characteristics, such as firm size and age. The independent t-test for equality of means revealed no significant differences, suggesting that the population characteristics are not causally related to the outcome.

Since all data of the dependent and independent constructs were gathered from a single key respondent within each service company, there is a potential for common method bias (Podaskoff et al., 2003; 2012). First, to address this issue, the questionnaire was designed *ex ante* to reduce common method bias (e.g. questions had no particular order, used different scales, varying scale lengths). These practices are intended to reduce respondents' fatigue. Secondly, we conducted *post hoc* tests for common method bias: the Harman single-factor test revealed that the items loaded on multiple distinct factors, with the first factor accounting for 42% of variance, suggesting that common method bias was not a serious problem. Second, through confirmatory factor analysis (CFA) we assessed a single factor model in which all of the items load on the same factor (Melton & Hartline, 2010; Podsakoff & Organ, 1986). However, the model indicated very poor fit statistics ($\chi^2_{(df=356)} = 6298.9$; CFI = 0.64; NFI = 0.62; RMSEA= 0.128). Thus both tests suggest that common method bias did not significantly affect the parameter estimates.

4.2. Measurement

In line with previous research on strategy types, the relationship strategy was operationalized through a self-reported measure (James & Hatten, 1995). Respondents were asked to read three different unlabeled paragraphs characterizing the relationship types, adapted from Hoffmann (2007): shaping, adaption, and stabilization relationship strategies. We used the descriptions from Zaefarian et al. (2011) (see Figure 1). Respondents were then required to indicate which paragraph best fits the relationship strategy of their organization with regard to the business relationship they focussed on for the purpose of answering the questionnaire. This classification built the basis for dividing the sample into three sub-groups.

For the outcome variable (i.e. relationship performance) as well as the seven conditions (i.e. relationship characteristics), seven-point Likert-type scales (anchored in 1=strongly disagree, to 7=strongly agree) were used with established multi-item reflective measurement models for all constructs. The outcome of interest in this study was relationship performance. Relying on the scale by Selnes and Sallis (2003) respondents indicated if the relationship with the customer company paid off in terms of costs (e.g. reduced marketing or sales costs) and benefits (e.g. product quality, financial, capacity utilization). With regard to the seven conditions examined, we differentiated between interpersonal and interorganizational trust (Seppaenen et al., 2007; Fang et al., 2008). The first one, *interpersonal trust*, was measured using five items (Zaheer et al., 1998) related to the trust placed between individuals of collaborating firms. The second, *interorganizational trust,* was also based on the scale of Zaheer and colleagues (1998). Using four survey questions the construct refers to mutual trust between collaborating firms. Commitment captures the enduring desire of a firm to maintain a valued relationship (Moorman et al., 1992). We take both affective and behavioral commitment into account. *Affective commitment* was measured through the three-item scale from Lee and colleagues (2004). To capture the *behavioral commitment* this study combines four items from previous empirical studies (Anderson & Weitz, 1992; MacMillan et al., 2005;

Sharma et al., 2006). To measure *communication* we employed four items developed by Palmatier and colleagues (2007), which capture the timely and accurate communication between both firms. To assess the presence of *cooperative norms* we used the five-item scale of Siguaw and colleagues (1998) measuring the extent to which the collaborating firms work together. Finally, *relationship specific investments* refer to idiosyncratic and not re-deployable investments in a relationship, which were measured through the three item scale by Selnes and Sallis (2003).

A confirmatory factor analysis (CFA) carried out on the full dataset assessed the factorial validity of the constructs. The results, summarized in table 2, show satisfactory overall model fit statistics: $\chi^2_{(df=499)} = 1180.65$, $p < 0.01$; CFI= 0.96; TLI= 0.95; RMSEA= 0.046). Furthermore, for each latent construct average variance extracted (AVE) and composite reliability (CR) indicate good convergent validity. Finally, the discriminant validity (e.g. Fornell & Larcker, 1981) of the constructs is supported, as the AVE values for each construct are higher than the squared correlations between all latent constructs (see table 2).

Insert Table 2 about here

4.3. Calibration

As described above, to employ fsQCA the raw data (outcome and conditions) must be transformed into fuzzy sets ranging from 0 to 1 (Ragin, 2007; Woodside, 2013). To calibrate the data, the process of transforming measurement scales (of values between 1 and 7) into set memberships (with values between 0 and 1), the specification of three different anchors is required (Ragin, 2008). These are two values of the original scales defining full non-membership as well as full membership, and additionally a crossover point. The crossover point defines the maximum membership ambiguity in which a particular case is neither in nor out of the set (Schneider et al.,

2010). By calculating the deviations from the crossover point (0.50) and taking the thresholds of full membership and full non-membership as upper and lower boundary anchors into account, the values of the re-scaled interval variables range between zero and one (Fiss, 2011). By allowing for partial memberships, the sets are becoming 'fuzzy' (Rihoux & Ragin, 2009), thereby minimizing the loss of information. We used the fs/QCA 2.5 program and applied the log-odds method for an automatic calibration procedure (Ragin, 2008).

For the outcome variable, i.e. relationship performance, the present study distinguishes between the outcome of 'high performance' as well as the 'absence of high performance' due to assumption of causal asymmetry. We created a fuzzy set variable for high performance (i.e. above-average performance), and one for the absence of relationship performance. Based on the average scores of the relationship performance construct we defined the crossover point. For high relationship performance we proceeded as follows: with regard to the lower and upper boundaries of the fuzzy calibration, firms were coded 0 if they showed performance scores below the 25th percentile of relationship performance, and were coded 1 if their performance exceeded the 75th percentile. In line with Fiss (2011), the reverse of the measures for high performance were used for the absence of high performance.

For the seven conditions examined we applied consistent calibration rules by defining the crossover point as the average of the construct scores. The threshold for non-membership (coded as 0) was set to the 10^{th} percentile and the one for full membership (coded as 1) to the 90^{th} percentile. As cases with precise membership scores of 0.50 will be dropped from the fsQCA analysis, we followed the recommendation of Ragin (2008) to add/subtract a constant term (e.g. 0.1 or 0.01). As this constant is added to all observations it does not impact the results. To give an example, the crossover point of communication (COM) is 22.1 (aggregated over all four COM-items; hence a maximum of 28); the full membership (COM≥27.0) and the non-membership

(COM≤16.0) boundary is calibrated accordingly. Table 3 summarizes the fuzzy set calibration rules and the resulting fuzzy set values for our seven conditions and the outcome in question.

Insert Table 3 about here

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5. ANALYIS

5.1. Analysis of Necessary Conditions

To identify if any of the seven conditions is regarded as necessary for causing relationship performance, we analyzed whether the condition is always present (or absent) in all cases where the outcome is present (or absent) (Ragin, 2008). In other words, relationship performance can only be achieved if the condition (i.e. relationship characteristic) in question occurs (Fiss, 2007). Therefore, the consistency scores were scrutinized; these measure the degree to which the observations align to this particular rule (Schneider et al., 2010). The more observations fail to meet this rule for a necessary condition, the lower will be the consistency score (Ragin, 2006). A single condition can be considered as necessary when the corresponding consistency score exceeds the threshold of 0.9 (Wagemann & Schneider, 2010; Schneider et al., 2010).

In the context of our study, for firms following a shaping relationship strategy, the consistency scores for the presence of the outcome (i.e. presence of relationship performance) ranged between 0.36 and 0.81. For the absence of the outcome (i.e. absence of relationship performance) we observed consistency scores of .39 to .79. The consistency scores for firms pursuing an adaption or stabilization relationship strategy were similar (see table 4). As none of the conditions examined exceeded the required threshold, the seven conditions (i.e. their presence as well as their absence) are neither necessary for relationship performance nor for the absence of relationship performance (see table 5). Overall, these results confirm that relationship performance

is a complex phenomenon and it cannot be described by single relationship characteristics. This finding is in line with Gestalt theory, assuming that no single condition alone causes the outcome (e.g. Dess et al., 1993). Rather, scholars should consider how conditions combine to achieve the outcome (Fiss, 2013; Woodside, 2013).

Insert Tables 4 and 5 about here

5.2. Analysis of Sufficient Conditions

The analysis of sufficient conditions starts with the construction of a truth table, listing all logically possible configurations of the seven relationship characteristics for each relationship strategy (Wagemann & Schneider, 2010; Ragin, 2000). Based on the set membership scores calibrated before, each observation is assigned to a particular configuration in the truth table. Overall, the truth table consists of 128 different configurations (2^k; k = number of conditions) ranging from instances including many observations to solutions that are not empirically observed in our sample (Fiss, 2011). To reduce the truth table to meaningful configurations, we chose a frequency threshold of five observations to exclude less important configurations. Accordingly, configurations with 0 to 4 cases are treated as remainders.

In the next step, the researcher needs to define which configurations are sufficient for achieving the outcome (e.g. Ganter & Hecker, 2013). A causal combination of conditions is sufficient if all observations of the particular configuration are followed by the outcome (Greckhamer et al., 2008). To measure the degree to which the cases correspond to the outcome we again referred to the consistency (Fiss, 2007; 2011). Causal conditions exceeding a predefined consistency cut-off value are regarded as sufficient for the outcome (value of 1) and configurations below are assigned an outcome value of 0. In our model, the consistency scores for firms with a

shaping relationship strategy ranged between 0.34 and 0.90 (adapting: 0.42-0.92; stabilizing: 0.33-0.89). In line with extant research (e.g. Cheng et al., 2012; Fiss, 2011; Ganter & Hecker, 2013), we set the lowest acceptable consistency score at ≥0.80, which is above the minimum recommended threshold of 0.75 (Ragin, 2006; Woodside, 2013).

Finally, when using fsQCA, the truth table is reduced to simplified combinations by employing Boolean algebra. To overcome the problem of limited diversity, i.e. a situation where many configurations exist with few or no observations, fsQCA differentiates between easy and difficult counterfactuals (see Fiss 2011, for a detailed discussion). By taking these two types of counterfactuals into account, fsQCA provides three solutions: complex (not relevant in this study as neither easy nor difficult counterfactuals are included), intermediate (simplifying assumptions based on easy counterfactuals) and parsimonious (simplifying assumptions regardless of the type of counterfactuals). Overall, core conditions are part of both intermediate and parsimonious solutions, while peripheral conditions only appear in the intermediate solution (Fiss, 2011).

Insert Table 6 about here

The solution table is reported in table 6. To determine whether the configurations are informative, two measures are available: consistency and coverage. First, *consistency* measures the extent to which a configuration corresponds to the outcome (Fiss, 2011). As all of the consistency scores exceed the cut-off value (≥0.80), all configurations can be considered as sufficient for the outcome. Second, the *coverage scores* assess the proportion of cases that follow a particular path and thus capture the empirical importance of an identified configuration (Fiss, 2007). The *raw coverage* quantifies the proportion of membership in the outcome explained by each term of the configuration (Ragin, 2006). However, cases are usually explained by more than one causal path

(Schneider et al., 2010). Controlling for this, *the unique coverage* measures the proportion of cases explained exclusively by one configuration – excluding memberships that are covered by other causal paths (Ragin, 2006). The literature argues (e.g. Schneider et al., 2010) that the unique coverage should be larger than zero; otherwise the configuration does not contribute to the explanation of the outcome. Except for solution 2d, this requirement is fulfilled, and solution 2d is therefor eliminated from further considerations.

Finally, the *solution coverage* of the overall model refers to the joint importance of all configurations (Rihoux & Ragin, 2009). For illustration purposes, it is roughly comparable to explained variance (R^2) in regression-based analyses (Ragin, 2006). For the first model of the shaping relationship strategy type, the two identified configurations accounted for 53% of the memberships in the outcome. The overall solution coverage for firms pursuing an adaption (.59) or stabilization relationship strategy type (.52) is similar. In fsQCA research scholars typically assume that a model is informative when the solution coverage is between .25 and .65 (Ragin, 2008; Woodside, 2013). This is fulfilled in all of the identified models.

5.3. Configurations for the Presence of Relationship Performance

Overall, the solution in table 6 shows that first, the configurations differ by business strategy type, and second, that multiple configurations exist for each business strategy type, resulting in relationship performance. Moreover, the results also indicate the presence of core and peripheral conditions as well as neutral conditions. Specifically, for firms pursuing a shaping relationship strategy (configurations 1a and 1b) interorganizational trust, relationship specific investments and communication are core conditions. Furthermore, for solution 1a affective and behavioral commitment plus cooperation are peripheral conditions, while solution 1b depends on both commitment types as well as interpersonal trust. Comparing both solutions 1a and 1b indicates that interpersonal trust and cooperation can be treated as substitutes.

We found a different pattern of core and peripheral conditions for the four solutions (2d excluded) leading to relationship performance within an adapting relationship strategy type. Behavioral commitment is the single core condition for all of the solutions. The solutions 2c and 2e further rely on the two trust dimensions, affective commitment and communication, while relationship-specific investments and cooperation are substitutable between both configurations. With regard to the peripheral conditions of solutions 2a and 2b, affective commitment and relationship-specific investments are crucial - regardless of whether interpersonal trust is present or absent, as indicated by the blank field. In addition, communication and cooperation are required (solution 2a). However, the results show that interorganizational trust can substitute for the absence of communication and cooperation (solution 2b).

Finally, we found two different configurations associated with relationship performance for firms with a stabilizing relationship strategy type. Solutions 3a and 3b show that commitment plays a pivotal role for this relationship strategy as both affective and behavioral commitment (and also inter-organizational trust) are identified as core conditions. In addition, for solution 3a the peripheral conditions interpersonal trust, communication and relationship-specific investments are important. In the absence of the latter two conditions cooperation can be treated as a substitute, as shown in solution 3b.

Most notably, for all of the eight identified configurations across business strategy types, cooperation and interpersonal trust are not identified as core conditions. However, we found that both the presence and absence of cooperation can promote relationship performance as a peripheral condition.

5.4. Configurations for the Absence of Relationship Performance

Contrary to regression-based approaches, QCA accounts for the possibility of causal asymmetry, that is, configurations leading to relationship performance might be quite different (i.e. not just

inverted) from those leading to the absence of relationship performance (Fiss, 2007; Woodside, 2013). To test this, we conducted another set of fsQCA analyses in which the absence of relationship performance represents the outcome, coded as the reverse of relationship performance.

In line with our previous findings, none of the seven conditions (presence as well as absence) can be regarded as necessary for causing the absence of relationship performance. We also applied a consistency score of 0.80 for the analysis of sufficient conditions. We found a different pattern of solutions for nonperforming cases compared to our initial analysis of well performing cases (see table 7). Altogether, six configurations creating the absence of relationship performance exist. The two solutions for firms with a shaping relationship strategy clearly show that a lack of interorganizational trust and communication, which are the two core conditions, drive the absence of relationship performance. Three configurations exist for non-performing firms following an adapting relationship strategy. With regard to the core conditions, the absence of interorganizational trust, behavioral commitment and cooperation leads to this outcome. Finally, we found one causal path for firms with a stabilizing relationship strategy. For this solution, all of the six identified conditions are core conditions at the same time. Comparing these findings with the results for the presence of relationship performance, our analysis provided clear evidence of asymmetric causality: different sets of core and peripheral conditions are observable for the absence of performance, which are not merely a reverse of the effects that cause performance.

Insert Table 7 about here

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6. CONCLUSION

6.1. Theoretical discussion and implications

In recent years, empirical and anecdotal evidence have advanced an understanding of factors impacting on the performance of business relationships (Fang et al., 2008; Palmatier et al., 2007; Zaheer et al., 1998). Prior studies for the most part focus their analysis on the individual effect of success drivers. These studies typically suggest that firms which perform very well on all dimensions of relationship characteristics, will show significant and positive effects on performance constructs, such as relationship performance. Generally speaking, this points to a lack of research integrating the multitude of relationship characteristics (i.e. conditions) into an overarching analytical framework to account for the interdependencies between these conditions. Specifically, employing a configurational approach enabled us to simultaneously analyze distinct conditions promoting relationship performance and to show how the relevant relationship characteristics jointly impact the success of business relationships, thus widening the scope of this theory.

In particular, the results provided evidence that no single relationship characteristic by itself causes the outcome in question. Relationship performance is contingent on the presence (or absence) of multiple causal conditions. To state it differently, only configurations of different relationship characteristics lead to high relationship performance. This perspective complements extant research highlighting the critical role of individual factors such as trust or commitment (Morgan & Hunt, 1994; Palmatier et al., 2006) in promoting efficiency, productivity and effectiveness of business relationships. For example, variable-based approaches argued that an insufficient level of trust can be responsible for the poor performance of business relationships (Buchel, 2003; Inkpen & Beamish, 1997). However, the findings of our research support the idea that the interplay of variables, i.e. how they combine, is key to deciding whether certain conditions are sufficient for achieving relationship performance or not. Our study thus offers an answer to the on-going call of Palmatier and colleagues (2007) for more research to "resolve differences in causal

ordering among theoretical perspectives and a more integrated view" (p. 189) in inter-organizational relationships.

Our study also provides a fine-grained perspective on the strategy type typology by Hoffmann (2007) who distinguishes between shaping, adapting and stabilizing relationship strategies. Specifically, our research reveals that each of these strategies requires very different sets of relationship characteristics to promote relationship performance. In support of this, the configuration theory argues that strategies are not universally effective (e.g. Ketchen et al., 1997; Venkatraman, 1989). Specifically, we find that there is no best relational strategy type. Irrespectively of their strategic intent, firms can achieve high relationship performance as long as the relevant relationship characteristics are aligned. In other words, the success of interfirm relationships is not about choosing the right strategy, but rather about how companies combine the causal prerequisites, i.e. relational characteristics, to fit a chosen strategy. Moreover, this study sheds light on the question as to whether alternative recipes for success for each strategy type exist. In line with the concept of equifinality, we identified several causal paths comprising a different set of relationship characteristics, all of which enable the firm to achieve successful business relationships. Specifically, the adapting strategy is associated with a wide range, i.e. four configurations, compared with a shaping and stabilizing relationship strategy which can be achieved by two different configurations each. A closer look reveals that certain approaches are linked to the outcome more often than others. To give an example, for companies following a stabilizing strategy, the first configuration reports the highest unique coverage (.30). Consequently, this is the most effective set of causal conditions to achieve the outcome.

In light of this, our study also accounts for possible causal asymmetry by investigating configurations for the absence of relationship performance, or the recipes for failure. To date most studies on inter-organizational performance have neglected this issue (Fang et al., 2008; Palmatier

et al., 2007). However, our findings show that configurations leading to relationship performance are distinct from (and thus not just the reverse of) those promoting the absence of relationship performance. Most notably, the analysis of causal asymmetry shows that a lack of interorganizational trust is a core condition for all of the identified configurations leading to absence of relationship performance. Irrespective of their strategic intent, the sampled companies failed if there was a lack of trust between two collaborating firms. Although two commitment types and relationship-specific investments are present (such as in configuration 1b), they cannot counteract the absence of interorganizational trust. This finding supports the literature about trust being a key factor for avoiding unsuccessful business relationships (e.g. Fang et al. 2008), even though it is not sufficient to achieve well-performing business relationships.

In addition, our research disentangles the precise nature of relationship characteristics in terms of whether they can be regarded as being essential or being less important (or even exchangeable) within a configuration. Therefore, following the idea of Fiss (2011, p. 411), the identified equifinal recipes for the presence and absence of relationship performance are decomposed into a "configurational core and periphery based on causal relations with an outcome." By doing so, underlying patterns of cause-effect relationships are revealed.

Finally, from a methodological perspective, this research provides one of the first empirical studies applying configuration theory to the field of business relationships. We offer scholars interested in a configurational logic a structured guideline for using fsQCA as a means for analyzing complex sets of interrelated causal conditions. This innovative approach provides a foundation for "both context-rich qualitative research that scrutinizes a small number of cases and quantitative studies that validate simplified relationships between factors for a large number of firms" (Ganter & Hecker, 2013, p. 7). Unlike traditional regression-based approaches (such as SEMs) fsQCA does not investigate the effects of individual relationship constructs, but rather

analyzes how conditions combine to create an outcome (Ragin, 2006). At the same time, fsQCA allows for the identification of various alternative recipes for success, as well as understanding the configurations that are asymmetric in nature (Woodside, 2013).

6.2. Managerial implications

Our study offers several implications for managerial practice. Because companies have scarce resources, they often have to choose where to focus their efforts. These conditions are likely (e.g. due to resource constraints) in situations where they are required to manage their business relationships effectively, with a focus on some but not all identified levers (i.e. relational characteristics) to achieve superior relationship performance. Managers need to know from which configurations of relational characteristics they can choose to foster relationship performance, an insight which is not provided by 'traditional' variable-based analyses (Fiss, 2007). Thus, by drawing on configuration theory, this study provides specific guidelines to help managers of service companies to design business relationships in ways that are aligned with the companies' strategic intent.

In particular, it is important for managers to realize that there is no best relational strategy type. Service companies need to orchestrate different relationship characteristics in alignment with the requirements for a given relational strategy type. For these companies, the results offer a plausible explanation as to why some of the business relationships are more successful than others by relating them to their context as part of the implementation of a specific relational strategic intent. For each strategy type, specific configurations based on relational dimensions exist that have to be understood as a whole.

Firms pursing a shaping relationship strategy predominantly rely on communication, interorganizational trust, and relationship-specific investments as core conditions. Consistent with the literature, which stresses the importance of knowledge sharing to enhance innovation

capabilities (e.g. Amara et al., 2009), this study reveals that communication is vital for these firms. Similarly, Hoffmann (2007) argued that the success of shaper companies is dependent on their ability to develop new technologies (i.e. innovation) and to explore market opportunities. Hence, the expansion and deepening of their resource base is crucial. From this point of view, firms should focus on sustaining a stable relationship with their most important customers. Relationship-specific investments are a promising way to demonstrate a company's long-term desire to maintain relationships (Anderson & Weitz, 1992) and signal dedication to a specific customer (Gilliland & Bello, 2002). Idiosyncratic investments show that a company can be 'believed' and truly cares about the relationship (Palmatier et al., 2007). However, specific investments are not easily recoverable and carry considerable risk because they could be lost if the relationship is terminated prematurely (e.g. due to conflicts). Therefore, mutual trust between the firms helps to reduce perceived risk in the sense of serving as a safeguarding mechanism (Arnold et al., 2011), ultimately promoting a greater willingness to invest resources in the relationship (Fang et al., 2008).

Secondly, companies following an adapting relationship strategy need to emphasize the behavioral dimension of commitment to increase relationship performance. These firms should stress the behavior commitment as a core condition, i.e. above all other relationship characteristics. This finding is consistent with the literature (Morgan & Hunt, 1994; Palmatier et al., 2007) arguing that commitment is one of the prime determinants of relationship performance. While these firms reactively adapt to environmental changes without making big investments (Hoffmann, 2007), other factors such as relationship-specific investments seem to be less important. At the same time, emphasis on commitment promotes the "emergence of relational norms" and also "fosters behaviors that support bilateral strategies to accomplish shared goals" (Palmatier et al., 2007, p. 177). Accordingly, commitment stimulates relationship continuation of valued business partners (Moorman et al., 1992) and thus, for example, may compensate for a lack of communication or

cooperation (e.g. as in configuration 2b).

Thirdly, our research indicates that in order to ensure relationship performance as part of a stabilizing strategy, companies should focus on both commitment dimensions as well as interorganizational trust. Similarly, empirical evidence suggests that these constructs (i.e. trust and commitment) individually or together positively impact the success of business relationships (e.g. Anderson & Weitz, 1992). However, in contrast to Morgan and Hunt (1994), our research does not assume that trust is a precondition of commitment. Rather, both constructs of trust and commitment need to be present to achieve the full benefits of relationships with their most important customers as part of a stabilizing strategy. Similar to a shaping strategy, these companies rely predominantly on firm-based trust – confirming the literature underscoring the importance of interorganizational trust in business relationships (Fang et al., 2008). Such trust reduces opportunistic behavior, which is critical when companies possess long-term contracts with their business partners which is frequently the case when companies follow a stabilizing relationship strategy (Hoffmann, 2007).

Although the existing literature stressed the importance of cooperative norms and interpersonal trust to enhance relationship performance (e.g. Zaheer et al., 1998; Siguaw et al., 1998), our study revealed that these two conditions are not core for any of the identified configurations. However, for some configurations they serve as a peripheral condition, and thus can be substituted. Our results qualify the findings of previous studies such as Dirks and Ferrin (2001) who argue that trust always promotes desirable performance outcomes. Similarly, it is often argued that firms should consider both interfirm and interpersonal trust for enhancing relationship performance (e.g. Doney & Cannon, 1997; Zaheer et al., 1998). However, by taking a broader set of relationship characteristics into account, this study reveals that the performance benefits of cooperative norms and interpersonal trust seem to be subordinate. To sum up, managers of service firms should not bet on the wrong horse – for each situation a specific set of relational

characteristics need to be in place, and different recipes for success provide a menu of choices.

6.3. Limitations and future research

Although our study offers new insights into configurations of relationship characteristics, it is subject to several limitations that indicate opportunities for future research. In particular, three areas can be mentioned. First, the sample in our study was restricted to service firms in the United States. As in the case of any single country study, the findings should be generalized with caution. The rationale for our design choice was motivated by the observation that building effective and successful business relationships is particularly relevant for service firms operating in industrialized countries such as the United States (Bettencourt et al., 2002; Miles, 2005). Nevertheless, the applicability of the results to other countries may be limited. Therefor, there is a need for identifying whether or not our findings are transferrable to other (cultural) contexts. In particular, comparative research between developed and emerging economies is lacking – both differ significantly in terms of the specifics of cultural issues as well as the overall business systems (Cheng & Krumwiede, 2012). Given the rise of BRIC countries, research should thus be extended to verify whether the same set of relationship characteristics work equally effectively in different settings (e.g. Biggemann & Fam, 2011).

Secondly, data was obtained from a single key-informant in each company. Thus, the evaluation of the relationship characteristics (i.e. conditions) and the relationship performance (i.e. outcome) is inclined towards subjective biases. For that reason, we followed the suggestions of Podsakoff et al. (2003) to limit potential impact for common method bias (through ex ante and post hoc measures). Nevertheless, to overcome such biases future research should adopt a multiple informant approach, for example, by integrating various informants such as marketing, sales and operations managers. Moreover, it would be desirable to have objective data for the performance outcome. However, in the context of this study objective data was not available. Although

perceptual measures are highly correlated with objective ones (Prajogo, 2006), we invite scholars to include objective metrics to validate our findings.

A final limitation is that the model encompasses seven conditions or relationship characteristics that jointly impact the relationship performance in service firms. The identified conditions might not cover the full range of factors promoting relationship performance, and also may differ by country. For example, we did not address relationship age or stability in our study. Another potential avenue for future research is to extend our model by adding additional conditions or choosing a different set of conditions – thereby probing the stability of the identified configurations. Similarly, we do not specify the exact nature of the business relationship. That is, an identified configuration may be better or worse for achieving relationship performance depending on the specific context. In other words, different types of business relationships (e.g. knowledge acquisition, outsourcing) might require the presence of different relationship characteristics (Zaefarian et al., 2013), the understanding of which remains a challenging area of research.

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TABLES AND FIGURES

Table 1: Overview of Hofmann's (2007) relational strategies

Strategy type	***Description***
Shaping	*Our most important business relationships are built with the strategic intent to develop new resources and capabilities and to explore new opportunities. Envisioned outcomes and paybacks are distant in time and generally exhibit higher uncertainty. Our most important business relationships aim to actively shape the environment according to the firm's strategic interests. In light of that, our most important business relationships are used to jointly develop new technologies and to fundamentally improve product lines and service offerings to meet changing customer needs*
Adapting	*Our most important business relationships aim to reactively adapt to unfolding environmental dynamics through broadening the resource base and increasing strategic flexibility. This is done by exploring new opportunities without making high and irreversible investments. We typically establish several 'low- cost probes into the future' using different relationships, and make selective follow-up investments depending on the development of important environmental characteristics. This aims to increase strategic flexibility or to overcome high technological uncertainty.*
Stabilizing	*Our most important business relationships are aimed to commercialize existing resources and capabilities. Therefore they stabilize the environment and help refine and leverage the built-up resources to achieve a sustained and efficient exploitation of established competitive advantages through long-term contracts with customers and suppliers, or the use of partners to open up new distribution and sales channels for established products/services.*

Table 2: Measurement items and descriptive statistics

	Mean (SD)	CR	AVE
Interpersonal trust (Zaheer et al. 1998)	26.27 (4.48)	0.83	0.56
My contact persons have always been fair in negotiations with me.			
I know how my contact persons are going to act. They can always be counted on to act as I expect.			
My contact persons are trustworthy.			
I have faith in my contact persons to look out for my interests even when it is costly.			
I would feel a sense of betrayal if my contact persons' performance were below my expectations.			
Interorganizational trust (Zaheer et al. 1998)	21.26 (409)	0.90	0.69
These customers have always been fair in their negotiation with us.			
These customers do not use opportunities that arise to profit at our expense.			
Based on past experience, we can with complete confidence rely on these customers to keep promises made to us.			
These customers are trustworthy.			
Affective Commitment (Lee et al. 2004)	16.96 (3.04)	0.85	0.66
We want to remain a member of these customers' networks because we genuinely enjoy our relationships with them.			
We intend to continue the relationships with these customers, as we personally like their representatives.			
We want to continue the relationships with these customers as both parties are on friendly terms.			
Behavorial Commitment (Anderson/Weitz 1992; MacMillian et al. 2005; Sharma et al. 2006)	22.71 (3.67)	0.89	0.67
We dedicate whatever people and resources it takes to do business with these customers.			
We take a lot of time and effort to maintain the relationships with these customers.			
Our firm puts considerable investment into the business we do with these customers.			
We endeavour to strengthen our ties with these customers during the course of our relationships with them.			
Cooperation (Siguaw et al. 1998)	26.13 (4.57)	0.83	0.55
No matter who is at fault, problems are joint responsibilities.			
Both sides are concerned about the other's profitability.			
Both sides will not take advantage of a strong bargaining position.			
Both sides are willing to make cooperative changes.			
We do not mind owing each other favours.			
Communication (Palmatier et al. 2007)	22.07 (4.30)	0.93	0.78
Communications between both parties are prompt and timely.			
Communications between both parties are complete.			
The channels of communication are well understood.			
Communications between both parties are accurate.			
Relationship specific investments (Selnes and Sallis 2003)	16.01 (3.34)	0.88	0.70
We have made significant investments dedicated to these relationships.			
We have made several adjustments to adapt to these customers' technological norms and standards.			
Our systems and processes can easily be adjusted to a new relationship.			
Relationship performance (Selnes and Sallis 2003)	32.52 (5.89)	0.91	0.63
The relationships with these customers have resulted in lower marketing and sales costs.			
Flexibility to handle unforeseen fluctuations in demand has been improved because of these relationships.			
The relationships with these customers have resulted in better products/services quality.			
These relationships have a positive effect on our ability to develop successful new products/services.			
In these relationships, resource investments such as time and money, have paid off very well.			
These relationships help us to detect changes in end-user needs before our competitors do.			

Note: All items were measured on a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree); AVE= average variance extracted; CR = composite reliability; SD = standard deviation.

Table 3: Fuzzy set calibration rules

Construct	Calibration rule	
Relationship performance (RP)	If RP < 27.5	0 (fully non-membership)
	If RP = 33.1	0.5 (crossover point)
	If RP > 36.5	1 (full membership)
Interpersonal trust (IPT)	If IPT < 20.0	0 (fully non-membership)
	If IPT = 26.2	0.5 (crossover point)
	If IPT > 31.9	1 (full membership)
interorganizational trust (IOT)	If IOT < 16.0	0 (fully non-membership)
	If IOT = 21.2	0.5 (crossover point)
	If IOT > 26.9	1 (full membership)
Affective commitment (AC)	If AC < 12.0	0 (fully non-membership)
	If AC = 16.9	0.5 (crossover point)
	If AC > 20.0	1 (full membership)
Behavioral commitment (BC)	If BC < 17.0	0 (fully non-membership)
	If BC = 22.7	0.5 (crossover point)
	If BC > 27.0	1 (full membership)
Relationship-specific investments (RSI)	If RSI < 11.0	0 (fully non-membership)
	If RSI = 16.1	0.5 (crossover point)
	If RSI > 20.0	1 (full membership)
Communication (COM)	If COM< 16.0	0 (fully non-membership)
	If COM = 22.1	0.5 (crossover point)
	If COM > 27.0	1 (full membership)
Cooperation (COOP)	If COOP < 20.0	0 (fully non-membership)
	If COOP = 26.1	0.5 (crossover point)
	If COOP > 31.9	1 (full membership)

Note: Sensitivity checks were conducted. Alternative calibrations (e.g. upper/lower boundaries varied by +/- 5%) provide similar results regarding core/peripheral conditions as well as the number of solutions. Overall, the results remain substantively unchanged.

Table 4: Necessary conditions for the presence of relationship performance

	Shaping		Adapting		Stabilizing	
Condition	**cons.**	**cov.**	**cons.**	**cov.**	**cons.**	**cov.**
Interpersonal trust	0.75	0.71	0.75	0.78	0.76	0.71
~Interpersonal trust	0.41	0.41	0.40	0.48	0.41	0.41
Interorganizational trust	0.78	0.75	0.76	0.78	0.75	0.74
~Interorganizational trust	0.40	0.40	0.40	0.48	0.43	0.40
Affective commitment	0.81	0.75	0.81	0.76	0.81	0.71
~Affective commitment	0.37	0.38	0.33	0.45	0.35	0.37
Behavioral commitment	0.79	0.71	0.78	0.78	0.76	0.73
~Behavioral commitment	0.37	0.40	0.37	0.46	0.41	0.40
Relations. specific invest.	0.76	0.69	0.75	0.76	0.77	0.71
~Relations. specific invest.	0.42	0.44	0.40	0.50	0.41	0.41
Communication	0.81	0.77	0.81	0.78	0.77	0.73
~Communication	0.37	0.37	0.33	0.43	0.41	0.40
Cooperation	0.78	0.75	0.76	0.77	0.75	0.74
~Cooperation	0.39	0.38	0.39	0.48	0.42	0.39

Note: ~indicates the absence of a condition; cons. = consistency; cov. = coverage

Table 5: Necessary conditions for the absence of relationship performance

	Shaping		Adapting		Stabilizing	
Condition	**cons.**	**cov.**	**cons.**	**cov.**	**cons.**	**cov.**
Interpersonal trust	0.44	0.44	0.45	0.38	0.45	0.45
~Interpersonal trust	0.71	0.75	0.74	0.71	0.71	0.76
Interorganizational trust	0.42	0.43	0.47	0.39	0.40	0.43
~Interorganizational trust	0.75	0.78	0.74	0.71	0.76	0.77
Affective commitment	0.43	0.42	0.50	0.38	0.45	0.43
~Affective commitment	0.75	0.81	0.68	0.74	0.70	0.80
Behavioral commitment	0.47	0.44	0.46	0.37	0.43	0.44
~Behavioral commitment	0.69	0.78	0.73	0.73	0.74	0.77
Relations. specific invest.	0.50	0.48	0.49	0.40	0.45	0.45
~Relations. specific invest.	0.67	0.75	0.70	0.70	0.71	0.77
Communication	0.40	0.40	0.46	0.36	0.43	0.44
~Communication	0.78	0.81	0.72	0.76	0.73	0.77
Cooperation	0.40	0.41	0.47	0.38	0.40	0.43
~Cooperation	0.76	0.78	0.72	0.71	0.76	0.77

Note: ~indicates the absence of a condition; cons. = consistency; cov. = coverage

Table 6: Sufficient conditions for the presence of relationship performance

	Shaping		Adapting					Stabilizing	
	1a	1b	2a	2b	2c	2d	2e	3a	3b
Interpersonal trust		●			●	●	●	●	●
Interorganizational trust	●	●		●	●	●	●	●	●
Affective commitment	●	●	●	●	●	●	●	●	●
Behavioral commitment	●	●	●	●	●	●	●	●	●
Relationship-specific investments	●	●	●	●		●	●	●	⊗
Communication	●	●	●	⊗	●		●	●	⊗
Cooperation	●		●	⊗	●	⊗			●
Consistency	0.90	0.89	0.90	0.83	0.92	0.87	0.91	0.86	0.88
Raw coverage	0.48	0.49	0.49	0.18	0.48	0.23	0.46	0.48	0.21
Unique coverage	0.04	0.05	0.05	0.01	0.05	0.00	0.01	0.30	0.03
Solution coverage	0.53				0.59			0.52	
Solution consistency	0.89				0.87			0.86	

Note: Black circles indicate the presence of a condition; circles with "x" indicate the absence, large circles indicate core conditions; small ones, peripheral conditions. Due to the unique coverage of .00, solution 2d is excluded from further interpretation.

Table 7: Sufficient conditions for the absence of relationship performance

	Shaping		Adapting			Stabilizing
	1a	1b	2a	2b	2c	3a
Interpersonal trust		⊗	⊗	⊗	⊗	
Interorganizational trust	⊗	⊗	⊗	⊗	⊗	⊗
Affective commitment	⊗	●	⊗	⊗		⊗
Behavioral commitment	⊗	●	⊗	⊗	⊗	⊗
Relationship-specific investments	⊗	●	⊗		⊗	⊗
Communication	⊗	⊗		⊗	⊗	⊗
Cooperation	⊗	⊗	⊗	⊗	⊗	⊗
Consistency	0.94	0.83	0.90	0.90	0.91	0.93
Raw coverage	0.42	0.20	0.38	0.39	0.40	0.45
Unique coverage	0.27	0.04	0.02	0.03	0.03	0.45
Solution coverage	0.47			0.45		0.45
Solution consistency	0.90			0.88		0.93

Note: Black circles indicate the presence of a condition; circles with "x" indicate the absence; large circles indicate core conditions; small ones, peripheral conditions.